

IN THE CLAIMS:

Amendments to the Claims

Please amend claims 1, 2, 7 and 8 as shown below:

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A plasma processing apparatus to provide plasma processing of a substrate by plasma, said plasma processing apparatus comprising a plasma processing gas supply means, an exhaust means in a plasma process chamber, and a plasma generating means, said plasma generating means further comprises:

a first capacitatively coupled plasma generating means; and

a second electromagnetic wave radiation plasma generating means;

wherein said first capacitatively coupled plasma means includes an opposed electrode consisting of a plurality of mutually isolated conductors oppositely disposed with respect to a stage electrode and means to supply high-frequency power to said opposed electrode through a matching box, said first capacitatively coupled plasma generating means being arranged so that a capacitatively coupled plasma discharge is generated between said opposed electrode and said stage electrode;

wherein said second electromagnetic wave radiation plasma generating means comprises insulators disposed between at least a portion of a plasma process chamber and said plurality of isolated conductors, respectively, said second electromagnetic wave radiation plasma generating means being arranged so that an electromagnetic wave is radiated from at least a position between said plurality of isolated conductors which are connected to said matching box by supply of current through at least one of an inductor L and a capacitor C and said plasma process chamber forming a resonance circuit including at least one of said L and C so as to

generate plasma discharge in said plasma process chamber, a resonance of said resonance circuit including at least one of said L and C being controlled; and
wherein said first capacitatively coupled generating means and said second electromagnetic wave radiation plasma generating means combine to provide plasma discharge in the plasma process chamber with enhanced plasma distribution controllability.

~~a capacitatively coupled discharge means consisting of mutually isolated multiple conductors,~~

~~an electromagnetic wave radiating means to cause radio frequency displacement current to flow between said conductors and to emit electromagnetic wave, and~~

~~a magnetic field forming means;~~

~~wherein said electromagnetic wave radiating means further comprises a radiated electromagnetic wave power control means to control the radiated electromagnetic wave power through radio frequency displacement current control means forming an LC resonant circuit, said radiated electromagnetic wave power control means including a distribution controller connected to a matching box and a high frequency power supply which provide said radio frequency displacement current to said LC resonant circuit; and wherein said distribution controller controls said radiated electromagnetic wave power by controlling said radio frequency displacement current flowing to said LC resonant circuit.~~

2. (currently amended) A plasma processing apparatus according to claim 1, wherein said second electromagnetic wave radiation plasma generating means is arranged so that said plasma discharge is generated under an ECR condition controlled by a magnetic field formed by coils and said electromagnetic wave is

radiated to said plasma process chamber, to provide plasma processing of a substrate by plasma, comprising:

~~a capacitatively coupled discharge means consisting of mutually isolated multiple conductors; and~~

~~an electromagnetic wave radiating means to cause radio frequency displacement current to flow between said conductors and to emit electromagnetic wave;~~

~~wherein said electromagnetic wave radiating means further comprises a radiated electromagnetic wave power control means to control radiated electromagnetic wave power using the radio frequency displacement current control means forming an LC resonant circuit, said radiated electromagnetic wave power control means including a distribution controller connected to a matching box and a high frequency power supply which provide said radio frequency displacement current to said LC resonant circuit; and~~

~~wherein said distribution controller controls said radiated electromagnetic wave power by controlling said radio frequency displacement current flowing to said LC resonant circuit.~~

3. (currently amended) A plasma processing apparatus according to Claim 1 or 2 further characterized by a means to store a processing procedure to control distribution during plasma processing and said a distribution controller controls plasma distribution during plasma processing according to the processing procedure stored in said store means.

Claims 4-6 (canceled)

7. (currently amended) A plasma processing apparatus according to claim 1, further comprising a means to send supply RF current to the substrate to be processed, wherein said plasma processing apparatus further includes a RF bias circuit which is separated from ground so as to send supply RF current to the substrate to be processed .

8. (currently amended) A plasma processing apparatus according to claim 1, further comprising a means to process plasma using the generated plasma, wherein said means to process plasma enables sending supplying of RF current to the substrate to be processed and includes multiple RF current conducting means installed at a position opposite to a position where the substrate to be processed is mounted, said multiple RF current conducting means being provided with a means to control a ratio of RF current flowing from the substrate to be processed to each of said multiple RF current conducting means.